

## PATENT COOPERATION TREATY

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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference MLC/JPS/2707PC	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. PCT/GB2004/005445	International filing date (day/month/year) 22.12.2004	Priority date (day/month/year) 23.12.2003	
International Patent Classification (IPC) or national classification and IPC C08L59/00, C08G2/38, C08G63/00, A61L27/18			
Applicant SMITH & NEPHEW, PLC et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand  30.05.2005		Date of completion of this report  24.01.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer  Schlicke, B  Telephone No. +31 70 340-	



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/GB2004/005445

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-38 as originally filed

**Claims, Numbers**

1-31 as originally filed

**Drawings, Sheets**

1/6-6/6 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	3-6,9-31
	No: Claims	1,2,7,8
Inventive step (IS)	Yes: Claims	3-6,9-31
	No: Claims	1,2,7,8
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

- 1 Reference is made to the following documents:

D1: EP-A-0 803 521 (NIPPON SHOKUBAI CO., LTD) 29 October 1997  
D2: GB 807 589 A (E. I. DU PONT DE NEMOURS) 21 January 1959  
D3: WO 99/22770 A (SHEARWATER POLYMERS) 14 May 1999  
D4: US-A-5 407 445 (TAUTVYDAS ET AL) 18 April 1995

- 2 Document D1 teaches (claims 1,2,8; page 5, lines 28-37; page 12, lines 14-16) biodegradable block copolymers comprising polyalkylene glycol residues connected by polyacetal linkages. The polyols may comprise up to 500 repeating units which should result in molecular weights of more than 4000 Daltons.

Hence, the subject-matter of present claims 1,2,7 and 8 lacks novelty in view of this teaching (Article 33(2) PCT).

- 3 Document D2 teaches (claims 1,2; page 2, lines 78-81) block copolymers comprising polytetramethylene glycol residues having a molecular weight of more than 7000 connected by polyoxymethylene units.

Hence, the subject-matter of present claims 1,2,7 and 8 lacks novelty in view of this teaching (Article 33(2) PCT).

- 4 Document D3 teaches (claims 1,3-5; examples; page 7, line 9) pharmaceutical compositions of biodegradable block copolymers comprising PEG segments, polyol segments, and acetal linkages. D3 fails to teach the molecular weights of the polyol or PEG segments.

Hence, the subject-matter of present claims 1-31 appears novel in view of this teaching (Article 33(2) PCT).

- 5 Document D4 teaches (claim 1) filler for prostheses comprising biodegradable polyoxyethylene-polyoxypropylene block copolymers. The polyoxypropylene segments have molecular weights of up to 6000 Daltons. The segments are not

connected via acetal linkages.

Hence, the subject-matter of present claims 1-31 appears novel in view of this teaching (Article 33(2) PCT).

- 5 None of the available prior art documents discloses or suggests alone or in combination with another teaching the embodiments of dependent claims 3-6 and 9-31. These claims therefore appear to comply with the requirements of Article 33 PCT.